for, even by combining it with opium, it is his object to produce the evacuant effect in the most marked manner. To this end he orders from twenty-five to thirty centigrammes in a mucilaginous mixture, of which a tablespoonful is taken every hour or two hours, following each dose by a tepid tisane or sugar and water, in order to produce efficient vomiting and purging. But when vomiting has been produced three times, and purging four times, he leaves off the medicine for fear of producing too much depression. In the present case but two tablespoonsfuls of the mixture had to be given before sufficient vomiting and purging were produced. And on the evening of the day on which it was given the temperature sank considerably, and by twenty-four hours after the antimony was commenced it had sunk from 40° C. to 37.7°, the pulse falling to 70. The breathing was easy and the physical signs were far more favourable. A mixture consisting of twenty-five grammes of brandy was then prescribed in order to keep up his strength, and the next day the thermometer indicated 36.7°, and the pulse was only 66; and by forty-four hours after the antimony had been taken the lung had returned almost to its normal condition.

The case is very interesting in a clinical and therapeutical point of view; for when we leave pneumonia to itself, merely keeping up the strength of the patient by brandy and wine, an abatement of the fever takes place, but the amelioration is only temporary, and it returns. That was seen recently in the hospital in a case of pneumonia at its fourth day, with a temperature of 39.8°, and in which, by means of cupping and the administration of alcohol, the temperature was reduced on the sixth day to 37.5°. Next day, however, the thermometer had risen again to rather higher than 38°. This was very different from the rapid defervescence which took place in the present case. In that case also, although the patient might be considered as cured, having neither cough nor oppression of breathing, still, five or six days after the disappearance of fever, the persistence of the physical signs attested the presence of hepatization of the lung. So it is, in fact, in the subjects of pneumonia, who are treated in this manner—that is, when disease is left to itself, or when attempts are confined to husbanding the strength, the general phenomena are found to cease, and the local ones are amended, but the physical signs persist. In the case which is the subject of the lecture, on the contrary, it is the anatomical condition of the lung itself which has been modified by the treatment—so that in forty-eight hours after the tartar emetic was given all physical signs had disappeared. "The fact proves in a very positive manner the real efficacy of energetic treatment, whether by bleeding or by tartar emetic, administered as I have described. You may be persuaded that, if this latter treatment had not been had recourse to, the disease would have continued; and if, by the fact even of its evolution, the fever had declined, we should still have continued to observe in the lung the physical signs which characterize pulmonary hepatization."—*Med. Times and Gaz.*, Aug. 10, 1878.

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Sudden Death by Embolism.

In the *Archives Générales de Médecine* (June, 1878) Dr. TERRILLON gives the details of two cases in which sudden death was caused by embolism in the right side of the heart. Theoretically such a possibility has been admitted by many pathologists and clinical teachers, but confirmation of the theory has hitherto been wanting or imperfect. The first case cited by Dr. Terrillon is borrowed from M. Tillaux, surgeon at the Lariboisière Hospital in Paris. A woman, 56 years of age, came under M. Tillaux's care for a fracture of the fibula and internal malleolus. The foot was partially dislocated outwards, and the skin was very tense over the malleolus, but without abrasion. The dislocation having been reduced, plaster of

Paris splints were applied, and everything went on satisfactorily till the twenty-third day after the accident, when the limb was found to be painful and swollen. This condition M. Tillaux thought might be due to pressure from the bandages, which he therefore loosened, and the patient was immediately relieved. Twenty days later (forty-three days after the accident), suddenly at the time of the doctor's visit, the patient, without having made the slightest movement, turned pale and ceased to breathe. After one or two minutes, consciousness returned rapidly, and she was able to give an account of her sensations. Dr. Tillaux had scarcely gone the distance of a few beds, when a second and mortal syncope occurred. At the necropsy, a thrombosis was found filling up the popliteal and femoral veins as far as the crural arch; the clot, which was adherent to the walls in almost its whole extent, was free above, fibrinous, and terminated in the form of a serpent's head. The pulmonary artery was free, the lungs sound, except for a slight congestion of the left. The heart was loaded with fat. The right ventricle contained a clot about two centimetres long, twisted in the columnæ carneæ. When this clot was compared with that in the femoral vein, it was manifest to every one that the cardiac embolon was a fragment of the crural clot.

The second case is that of a man who came under Dr. Terrillon's care for multiple fistulæ in the region of the coccyx, with extensive disease of that bone and of the sacrum. Resection of the one (its point excepted, which adhered to the fibrous ligament of the perineum) and rugination of the other were performed, the patient being under chloroform. The dressing was water and carbolic acid, and every morning Dr. Terrillon himself syringed out the wound with the same fluid. The patient's general health greatly improved, and the wound was healing, when one morning, being desired by Dr. Tillaux as usual to turn on his side, he did so, and then remained immovable. All means were tried to rouse him, without success. He took two or three deep inspirations, the pulse beat feebly, the eyes were half shut, the face and lips violet, there was no agony, and he died without having uttered a sound.

The necropsy soon revealed the cause of this sudden death. All the veins surrounding the diseased parts of the bones were full of clots and bathed in pus. The great veins of the pelvis, however, were intact, viz., the femoral, hypogastric and inferior vena cava. The left side of the heart was intact and in systole. It contained a few drops of blood, but no clots. The right side, on the contrary, contained, between the tricuspid valves, a clot about ten or twelve centimetres (four or five inches) long, cylindrical in form, scarcely as thick as a quill, entangled in the chordæ tendineæ, and projecting in one direction into the auricle, in the other into the ventricle. The pulmonary arteries, examined with great care, even in their smallest ramifications, contained no trace of clots, only dark liquid blood in abundance.

Dr. Terrillon considers the clot found in the right ventricle as the result of an embolon from the veins of the pelvis and sacral region, which were evidently in an abnormal state. The clot had the appearance and cluster of an old clot. It was gray, not white and gelatinous, like those formed in the heart at the moment of death. The bifurcation was quite distinct, and indicated that it must have come from a vein formed by the anastomosis of two smaller veins.

Is not the kind of death itself a sufficient proof that the clots, having come from some part of the venous system, had stopped in the heart? M. Charcot, who saw the specimen at the Société Anatomique, did not hesitate to say that he looked on this clot as an embolon which had stopped in the heart, and become the cause of death by impeding the action of the tricuspid valve.

Dr. Terrillon's conclusions are the following. 1. An embolon from the general venous system may stop in the heart instead of going into the pulmonary artery, as it is generally admitted it may do. 2. It may induce sudden death by apparent syncope, but there are certain phenomena which differ from the ordinary syncope, such as cyanosis of the face and lips, swelling of the veins in the neck. The heart does not stop suddenly, but its pulsations become all at once tumultuous, small, hardly perceptible, while the pulse is thread-like. After a few minutes, the heart stops completely. 3. There is no respiratory anxiety at the moment of death, no orthopnœa, as in embolism of the pulmonary artery. On the contrary, the patient dies without any apparent struggle. 4. When death has been preceded by transitory symptoms of apparent syncope, or in the case of patients suffering from phlebitis, we may suppose that a very slender or soft clot was stopped for an instant between the chordæ tendineæ of the tricuspid valve and has given rise to those accidents.—*Lond. Med. Record*, Aug. 15, 1878.

Diseases of the Diaphragm.

The diaphragm is a muscle the functions of which are of such importance that it is a matter of some surprise that so little attention has been paid to its diseases. With the single exception of the heart, no muscular structure of the body is in such constant action, and no muscle has so great influence on the functions of important viscera. And yet until now very few observations have been made upon its morbid states, and the student will search in vain for any important facts regarding its diseases, with the exception of a few valuable and suggestive observations recorded in our columns some ten years ago by Mr. CALLENDER. In the last number of *Virchow's Archiv*, however, is an account of some observations by Professor ZAHN, of Genth, which show how frequently it is found diseased, how varied are the morbid changes it presents, and which suggest very strongly that their influence may often be in a high degree prejudicial. It was, indeed, the observation of some cases in which slight bronchitis and emphysema, with congestion of organs, and simple, moderate dilatation of the right ventricle, seemed insufficient to account for death, but in which marked degeneration of the diaphragm coexisted, which led Zahn to study the condition of the diaphragm in other cases.

The result was the discovery that a degenerated state of the muscular fibres is by no means infrequent. The changes observed were of several kinds—simple brown atrophy, with proliferation of cells and nuclei, and granular clouding, with fatty and vitreous degeneration of the fibres. The former appears to be the more frequent, although the least important. It is not easily recognized with the naked eye, the muscular tissue appearing merely thinner than normal, and somewhat pale. The peritoneum covering it, when stripped off, has a brown colour, and between the muscular fasciculi collections of fat exist. The microscope reveals greatly degenerated fibres, lying among others nearly normal. The former have lost their striation, and contain many granules and spherules, much less numerous than those which characterize fatty degeneration, and the smaller disappearing under acids. About the nuclei are accumulations of yellowish granular pigment, sometimes separating proliferated nuclei. A peculiar protoplasm-like substance sometimes surrounds the nuclei, or lies in the muscular fibres, giving them a peculiar appearance, and in places occupying peculiar lateral bulgings of the wall, and these containing numerous nuclei. These bulgings may be so numerous as to be in contact. The proper tissue of the fibres so affected is always more or less degenerated. During two months Zahn met with no less than twenty cases in which this brown atrophy of the diaphragm was more or less marked. Almost all of the individuals presenting it were over fifty years of age; all were considerably emaciated; in most, other organs presented also simple